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AMENDMENTS TO THE CLAIMS:

This listing of the claims will replace all prior versions, and listings, of the claims in this application.

Claims 22 and 24 have been canceled.

Listing of Claims:

1. (Original) A method for frame sync detection using signal combining and correlation, the method comprising the steps of:

despreading PN coded signals to provide in-phase I_1 - I_n , and quadrature phase Q_1 - Q_n signals, wherein each I_1 - I_n and each Q_1 - Q_n signal contains at least one sync bit and where $n \geq 2$;

summing the at least one sync bit from each I_1 - I_n , and quadrature phase Q_1 - Q_n signals to form sums I_{s1} and Q_{s1} , respectively;

providing a reference sync, wherein the reference sync comprises at least one bit;

comparing each sum I_{s1} and Q_{s1} with the at least one bit from the reference sync;

accumulating the results of each I_{s1} and Q_{s1} comparison so as to form two accumulates, I_A and Q_A , respectively;

squaring each accumulate I_A and Q_A , respectively, to form I_A^2 and Q_A^2 ;

summing I_A^2 and Q_A^2 ; and

comparing $I_A^2 + Q_A^2$ with a predetermined threshold and as a result of the comparison, making a determination whether frame sync has been achieved is made.

2. (Original) A method as in claim 1, wherein the step of despreading PN coded signals to provide in-phase I_1 - I_n , and quadrature phase Q_1 - Q_n signals further comprises the step of letting $n=20$.

3. (Original) A method as in claim 1, wherein the step of summing the at least one sync bit from

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each I_1 - I_n and quadrature phase Q_1 - Q_n signals to form sums I_{s1} and Q_{s1} , respectively, further comprises the step of forming sixteen sync bit sums from each I_1 - I_n and quadrature phase Q_1 - Q_n signals.

4. (Original) A method as in claim 3, wherein the step of providing the reference sync further comprises the step of providing a sixteen-bit reference sync.

5. (Previously Presented) A method as in claim 1, wherein the step of providing the reference sync further comprises the step of storing the reference sync in a local accessible memory.

6. (Original) A method as in claim 1, wherein the step of providing the reference sync further comprises the step of receiving the reference sync from a remote source.

7. (Original) A method as in claim 1, wherein the step of summing I_A^2 and Q_A^2 further comprises the steps of:

performing a square root operation on the sum $I_A^2 + Q_A^2$; and

comparing the square root of the sum $I_A^2 + Q_A^2$ with the predetermined threshold value.

8. (Currently Amended) A device ~~for frame sync detection using channel combining and correlation, the device comprising:~~

a channel despreader, wherein the channel despreader provides at least two each in-phase I_1 - I_n and, quadrature phase Q_1 - Q_n channels, where $n \geq 2$;

at least one I-sync processor, wherein the at least one I-sync processor is coupled to the channel despreader, the at least one I-sync processor receiving I_1 - I_n data streams and providing an accumulated squared value I_A as an output;

at least one Q-sync processor, wherein the at least one Q-sync processor is coupled to the channel despreader, the at least one Q-sync processor receiving Q_1 - Q_n data streams and providing an accumulated squared value Q_A as an output;

~~an address controller coupled to the I-sync processor and the Q-sync processor;~~

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a first summer connected to the I-sync processor and the Q-sync processor to add the accumulated squared value I_A and the accumulated squared value Q_A to form a sum; and

a comparator, wherein the comparator is coupled to the first summer and compares the sum to a predetermined threshold, wherein the comparator compares a sum from the first summer with a predetermined threshold and, as a result of the comparison, a determination whether frame sync has been achieved is made.

9. (Original) A device as in claim 8 wherein the channel despreader comprises a direct sequence spread spectrum (DSSS) despreader.

10. (Original) A device as in claim 8 wherein the channel despreader comprises a frequency hop spread spectrum (FHSS) despreader.

11. (Currently Amended) A device as in claim 8 wherein the at least one I-sync processor comprises:

a first I-binary adder;

a first I-memory device, the first I-memory device coupled to the first I-binary adder;

a reference sync;

a first I-multiplier, wherein the first I-multiplier multiplies the reference sync with the output of the first I-memory device to provide an I-multiplier result;

a first I-accumulator, wherein the first accumulator comprises:

a first I-register bank;

a second I-adder, the second I-adder having at least two inputs, wherein one of the two inputs is coupled to an output of the first I-register bank;

a second I-register bank, wherein an output of the second I-register bank is coupled to an input of the second I-adder; and

a first I-squaring device, wherein the first I-squaring device is coupled to the output of the

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second I-register bank, wherein the first I-accumulator receives the I-multiplier result from the first I-multiplier and provides a squared accumulated I value.

12. (Original) A device as in claim 11 wherein the first I-binary adder comprises a two's-complement adder.

13. (Original) A device as in claim 11 wherein the first I-memory device comprises a first dual port 16x16 RAM.

14. (Currently Amended) A device as in claim 8 wherein the at least one Q-sync processor comprises:

a first Q-binary adder;

a first Q-memory device, the first Q-memory device coupled to the first Q-binary adder;

a first Q-multiplier, wherein the first Q-multiplier multiplies the reference sync with the output of the first Q-memory device to provide a Q-multiplier result;

a first Q-accumulator, wherein the first Q-accumulator comprises:

a first Q-register bank;

a second Q-adder, the second Q-adder having at least two inputs, wherein one of the two inputs is coupled to an output of the first Q-register bank;

a second Q-register bank, wherein an output of the second Q-register bank is coupled to an input of the second Q-adder; and

a first Q-squaring device, wherein the first Q-squaring device is coupled to the output of the second Q-register device, wherein the first Q-accumulator receives the Q-multiplier result and provides a squared accumulated Q value.

15. (Original) A device as in claim 14 wherein the first Q-binary adder comprises a two's-complement adder.

16. (Original) A device as in claim 14 wherein the first Q-memory device comprises a first dual

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port 16x16 RAM.

17. (Currently Amended) An integrated circuit (IC), wherein the integrated circuit comprises:

a channel despreaders, wherein the channel despreaders provides at least two each in-phase I_1 - I_n and, quadrature phase Q_1 - Q_n channels, where $n \geq 2$;

at least one I-sync processor, wherein the at least one I-sync processor is coupled to the channel despreaders, the at least one I-sync processor receiving I_1 - I_n data streams and providing an accumulated squared value I_A as an output;

at least one Q-sync processor, wherein the at least one Q-sync processor is coupled to the channel despreaders, the at least one Q-sync processor receiving Q_1 - Q_n data streams and providing an accumulated squared value Q_A as an output;

~~an address controller coupled to the I-sync processor and the Q-sync processor;~~

a first summer connected to the I-sync processor and the Q-sync processor to add the accumulated squared value I_A and the accumulated squared value Q_A to form a sum; and

a comparator, wherein the comparator is coupled to the first summer and compares the sum to a predetermined threshold, wherein the comparator compares a sum from the first summer with a predetermined threshold, and as a result of the comparison, a determination whether frame sync has been achieved is made.

18. (Original) An IC as in claim 17 wherein the IC comprises an Application Specific IC (ASIC).

19. (Original) An IC as in claim 17 wherein the IC comprises a field programmable gate array (FPGA).

20. (Original) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform method steps for frame sync detection using signal combining and correlation, the method comprising the steps of:

despreading PN coded signals to provide in-phase I_1 - I_n , and quadrature phase Q_1 - Q_n

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signals, wherein each I_1 - I_n and each Q_1 - Q_n signal contains at least one sync bit and where $n \geq 2$;

summing the at least one sync bit from each I_1 - I_n , and quadrature phase Q_1 - Q_n signals to form sums I_{s1} and Q_{s1} , respectively;

providing a reference sync, wherein the reference sync comprises at least one bit;

comparing each sum I_{s1} and Q_{s1} with the at least one bit from the reference sync;

accumulating the results of each I_{s1} and Q_{s1} comparison so as to form two accumulates, I_A and Q_A , respectively;

squaring each accumulate I_A and Q_A , respectively, to form I_A^2 and Q_A^2 ;

summing I_A^2 and Q_A^2 ; and

comparing $I_A^2 + Q_A^2$ with a predetermined threshold and as a result of the comparison, making a determination of whether frame sync has been achieved is made.

21. (Original) A program storage device as in claim 20 wherein the program of instructions comprise at least one Very High Speed Integrated Circuit (VHSIC) Hardware Description (VHDL) Language file.

22. (Canceled).

23. (Previously Presented) A device as in claim 8 wherein the device provides non-coherent power detection.

24. (Canceled).

25. (Previously Presented) An integrated circuit as in claim 17 wherein the device provides non-coherent power detection.

26. (New) A device comprising:

a channel despreader, wherein the channel despreader provides at least two each in-phase I_1 - I_n and, quadrature phase Q_1 - Q_n channels, where $n \geq 2$;

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at least one I-sync processor, wherein the at least one I-sync processor is coupled to the channel despreader, the at least one I-sync processor receiving I1-In data streams and providing an accumulated I_A squared value as an output;

at least one Q-sync processor, wherein the at least one Q-sync processor is coupled to the channel despreader, the at least one Q-sync processor receiving Q1-Qn data streams and providing an accumulated Q_A squared value as an output;

a first summer connected to the I-sync processor and the Q-sync processor to add the accumulated I_A squared value and the accumulated Q_A squared value to form a sum; and

a comparator, wherein the comparator is coupled to the first summer and compares the sum to a predetermined threshold, wherein the device provides non-coherent power detection.

27. (New) An integrated circuit (IC), wherein the integrated circuit comprises:

a channel despreader, wherein the channel despreader provides at least two each in-phase I1-In and quadrature phase Q1-Qn channels, where $n \geq 2$;

at least one I-sync processor, wherein the at least one I-sync processor is coupled to the channel despreader, the at least one I-sync processor receiving I1-In data streams and providing an accumulated I_A squared value as an output;

at least one Q-sync processor, wherein the at least one Q-sync processor is coupled to the channel despreader, the at least one Q-sync processor receiving Q1-Qn data streams and providing an accumulated Q_A squared value as an output;

a first summer connected to the I-sync processor and the Q-sync processor to add the accumulated I_A squared value and the accumulated Q_A squared value to form a sum; and

a comparator, wherein the comparator is coupled to the first summer and compares the sum to a predetermined threshold, wherein the integrated circuit provides non-coherent power detection.